

BEFORE THE BOARD OF ENVIRONMENTAL REVIEW
OF THE STATE OF MONTANA

In the matter of the adoption) NOTICE OF ADOPTION AND
of NEW RULE I and the) AMENDMENT
amendment of ARM 17.30.502,)
17.30.602, 17.30.607 through)
17.30.611, 17.30.621 through) (WATER QUALITY)
17.30.629, 17.30.635,)
17.30.641, 17.30.645,)
17.30.646, 17.30.702,)
17.30.715, 17.30.1001,)
17.30.1006 and 17.30.1007,)
pertaining to surface water)
quality)

TO: All Concerned Persons

1. On October 11, 2001, the Board of Environmental Review published a notice of the proposed adoption and amendment of the above-stated rules at page 1920, 2001 Montana Administrative Register, issue number 19.

2. The Board has amended ARM 17.30.502, 17.30.602, 17.30.607 through 17.30.611, 17.30.621, 17.30.622, 17.30.635, 17.30.641, 17.30.645, 17.30.646, 17.30.702, 17.30.715, 17.30.1001, 17.30.1006 and 17.30.1007 exactly as proposed. The Board adopted new rule I (17.30.619) and amended ARM 17.30.623 through 17.30.629 as proposed, but with the following changes made in response to Comment No. 1 below:

New Rule I (17.30.619) INCORPORATIONS BY REFERENCE (1) and (1)(a) remain the same as proposed.

(b) the Water Quality Standards Handbook, Second Edition, ~~(US EPA, September 1993, EPA-823-B-93-002)~~ EPA-823-B-94-005a, August 1994 that sets forth procedures for development of site-specific criteria;

(c) through (2) remain the same as proposed.

17.30.623 B-1 CLASSIFICATION STANDARDS (1) through (2)(i) remain the same as proposed.

(j) If site-specific criteria are developed using the procedures given in the Water Quality Standards Handbook, Second Edition, ~~(US EPA, September 1993)~~ EPA-823-B-94-005a, August 1994, and provided that other routes of exposure to toxic parameters by aquatic life are addressed, the criteria so developed shall be used as water quality standards for the affected waters and as the basis for permit limits instead of the applicable standards in department Circular WQB-7.

(k) remains the same as proposed.

17.30.624 B-2 CLASSIFICATION STANDARDS (1) through (2)(i) remain the same as proposed.

(j) If site-specific criteria are developed using the procedures given in the Water Quality Standards Handbook, Second Edition, ~~(US EPA, September 1993)~~ EPA-823-B-94-005a, August 1994, and provided that other routes of exposure to toxic parameters by aquatic life are addressed, the criteria so developed shall be used as water quality standards for the affected waters and as the basis for permit limits instead of the applicable standards in department Circular WQB-7.

(k) remains the same as proposed.

17.30.625 B-3 CLASSIFICATION STANDARDS (1) through (2)(i) remain the same as proposed.

(j) If site-specific criteria are developed using the procedures given in the Water Quality Standards Handbook, Second Edition, ~~(US EPA, September 1993)~~ EPA-823-B-94-005a, August 1994, and provided that other routes of exposure to toxic parameters by aquatic life are addressed, the criteria so developed shall be used as water quality standards for the affected waters and as the basis for permit limits instead of the applicable standards in department Circular WQB-7.

(k) remains the same as proposed.

17.30.626 C-1 CLASSIFICATION STANDARDS (1) through (2)(i) remain the same as proposed.

(j) If site-specific criteria are developed using the procedures given in the Water Quality Standards Handbook, Second Edition, ~~(US EPA, September 1993)~~ EPA-823-B-94-005a, August 1994, and provided that other routes of exposure to toxic parameters by aquatic life are addressed, the criteria so developed shall be used as water quality standards for the affected waters and as the basis for permit limits instead of the applicable standards in department Circular WQB-7.

(k) remains the same as proposed.

17.30.627 C-2 CLASSIFICATION STANDARDS (1) through (2)(i) remain the same as proposed.

(j) If site-specific criteria are developed using the procedures given in the Water Quality Standards Handbook, Second Edition, ~~(US EPA, September 1993)~~ EPA-823-B-94-005a, August 1994, and provided that other routes of exposure to toxic parameters by aquatic life are addressed, the criteria so developed shall be used as water quality standards for the affected waters and as the basis for permit limits instead of the applicable standards in department Circular WQB-7.

(k) remains the same as proposed.

17.30.628 I CLASSIFICATION STANDARDS (1) through (2)(i) remain the same as proposed.

(j) Beneficial uses are considered supported when the concentrations of toxic, carcinogenic, or harmful parameters in these waters do not exceed the applicable standards specified in department Circular WQB-7 when stream flows equal or exceed the flows specified in ARM 17.30.635(4) or, alternatively, for aquatic life when site-specific criteria are developed using the procedures given in the Water Quality Standards Handbook, Second Edition, ~~(US EPA, September 1993)~~ EPA-823-B-94-005a, August 1994, and provided that other routes of exposure to toxic parameters by aquatic life are addressed. The limits so developed shall be used as water quality standards for the affected waters and as the basis for permit limits instead of the applicable standards in department Circular WQB-7.

(k) remains the same as proposed.

17.30.629 C-3 CLASSIFICATION STANDARDS (1) through (2)(i) remain the same as proposed.

(j) If site-specific criteria are developed using the procedures given in the Water Quality Standards Handbook, Second Edition, ~~(US EPA, September 1993)~~ EPA-823-B-94-005a, August 1994, and provided that other routes of exposure to toxic parameters by aquatic life are addressed, the criteria so developed shall be used as water quality standards for the affected waters and as the basis for permit limits instead of the applicable standards specified in department Circular WQB-7.

(k) remains the same as proposed.

3. The following comments were received and appear with the Board's responses:

COMMENT NO. 1: One comment was received from Nathaniel J. Miullo, Chief of the Water Quality Unit, Region 8 of the United States EPA, stating that references to the Water Quality Standards Handbook were incorrect and provided the correct reference.

RESPONSE: The Board concurred and amended the rules as shown above to cite the correct edition of the Water Quality Standards Handbook.

COMMENT NO. 2: With regard to the chronic standard for hydrogen sulfide in WQB-7, there is a reference to footnote "(10)". However, this footnote refers to TCDD and not hydrogen sulfide. Obviously this is an error, and should be corrected. Thanks for the opportunity to review these standards.

RESPONSE: The Board agrees that the footnote does not apply to Hydrogen Sulfide and will be removed. No other footnote is needed.

COMMENT NO. 3: The proposed revision to Circular WQB-7, Montana Numeric Water Quality Standards, is the principal change proposed by the Board. EPA's review of the current version of WQB-7 (the September, 1999 version) identified errors in 62 of the numeric standards. These were, for the most part, calculation errors, and the EPA Region 8 and the Department of Environmental Quality (Department) staffs have worked together in resolving this problem. The proposed revision to WQB-7 will correct the calculation errors.

RESPONSE: Comment noted.

COMMENT NO. 3: The proposed revision to WQB-7 also includes changes based on updated and/or new EPA criteria recommendations. These are important changes, and they are consistent with EPA's expectation that States revise criteria values to be consistent with the most recently published EPA recommendations or State-derived, defensible alternatives. There are, however, two exceptions where the proposed revisions do not include criteria consistent with EPA's current recommendations. The exceptions are the human health criterion for mercury and the bacteriological criterion, E. coli (see comment 4).

EPA recently published an updated mercury criterion for the protection of human health that is expressed as a fish tissue concentration. This is a change from EPA's previous mercury criterion, which was based on a water column concentration. The mercury criterion in WQB-7 is based on the previously recommended water column concentration. In comments to the EPA Region 8, the Department staff has explained that the Department is not ready to recommend that the Board adopt the new tissue-based mercury criterion because EPA has yet to provide detailed implementation guidance. The EPA Region 8 agrees that implementation guidance is needed and that, for now, the 0.50 ug/l water column-based human health criterion in WQB-7 is acceptable. Once EPA has published suitable implementation guidance, however, we will expect the Board to revise WQB-7, adopting the new tissue-based criterion.

RESPONSE: The Board has considered the new EPA human health criteria for methylmercury and has decided to delay adoption of methylmercury standards until final EPA implementation guidance is available. The new water quality criteria for methylmercury is expressed as the concentration in fish tissue residue, which must then be translated to an equivalent concentration of total mercury or methylmercury in the water column. Guidance for making the necessary conversions is not available at this time. Guidance is also needed for application of the new criteria to MPDES permitting.

In addition, the Federal Register announcement of the new methylmercury criteria (Volume 66, Number 5, pp. 1344-1359)

the EPA acknowledges that "a fish tissue residue water quality criterion is new to States and authorized Tribes and will pose implementation challenges for traditional water quality standards programs." The notice also indicates that states may use a 5-year transition period during which guidance and implementation procedures will be developed.

COMMENT 4: EPA expects States to adopt EPA's recommended bacteriological criteria, based on E. coli, by no later than 2003. This includes adoption of geometric mean and single sample maxima criteria for all waters where recreational uses have been designated. In comments to the EPA Region 8, the Department staff has explained that it is not prepared to make the change from fecal coliforms to E. coli at this time. Since EPA has given States until 2003 to make this change, a change to E. coli is not required during this current revision to WQB-7. However, the Board should be aware that EPA intends to initiate federal promulgation of the bacteriological criteria in 2003 where needed changes have not been made, and therefore, a revision to WQB-7 will be needed prior to that deadline.

RESPONSE: During this triennial standards review the Board and department did not propose to make the change from the present standards based on fecal coliforms to either E.coli and/or enterococci because additional data is required. Work by the department is in progress to collect and analyze the necessary data to develop the appropriate standard(s). The department expects that it will take one to two years to accomplish this.

COMMENT NO. 5: The hardness footnote in WQB-7, footnote 12, needs to be revised. Currently, footnote 12 appropriately indicates that certain aquatic life criteria for metals are expressed as a function of total hardness. The footnote further explains that the hardness values used in the calculation of the metals criteria will be limited to a range of 25 mg/l - 400 mg/l hardness. This hardness range limitation is consistent with EPA's previous recommendation for metals criteria implementation (and, this is the approach promulgated by EPA in the National Toxics Rule). Now, however, EPA recommends a hardness range of 0 - 400 mg/l in implementing the metals criteria. That is, EPA now recommends there be no lower "cap" to the hardness range. This revised recommendation is based on technical information provided by EPA's Office of Research and Development indicating that, in waters with a hardness below 25 mg/l, "capping" the hardness at 25 mg/l may result in under protection of aquatic life uses. Accordingly, EPA has amended its previous recommendation, and footnote 12 should also be revised to reflect the new approach to implementing hardness-based aquatic life criteria for metals. This is the approach EPA

applied in its recent promulgation of standards for the State of California.

RESPONSE: The Board has considered the comment and concluded that it is beyond the scope of rulemaking. Removing the present lower bound of 25 mg/l as CaCO₃ hardness for calculating the surface water acute and chronic aquatic life standard for certain metals would be making the standard more stringent. Because the recommended change was not publicly noticed potential effected parties have not had an opportunity to have their comments heard. The Board will consider this comment during its next triennial review of the surface water quality standards.

COMMENT NO. 6: The proposed revisions will update the reference to EPA's Water Quality Standards Handbook. This is a useful revision in that the Handbook contains important program information, and its appendices include a number of key procedural documents. Unfortunately, the proposed reference is incorrect (this is an understandable error since EPA published two second editions with different dates). The reference should read: Water Quality Standards Handbook, Second Edition, EPA-823-B-94-005a, August 1994.

RESPONSE: The citation to EPA's Water Quality Standards Handbook will be corrected as suggested.

COMMENT NO. 7: The proposed revisions to the water quality standards include a number of general changes, such as amended classification language and segment boundary clarifications. These revisions will improve the water quality standards and are, accordingly, useful and acceptable.

RESPONSE: Comment noted.

COMMENT NO. 8: At the Board meeting to begin rulemaking a Board member recommended changing the parameter category term "toxin" to "toxic."

RESPONSE: The department agrees and will replace the term "toxin" with "toxic" in the WQB-7 parameter category.

COMMENT NO. 9: The EPA drinking water standard for Beta emitters no longer recommends using the effective dose equivalent (EDE) analysis method, therefore, the reference to EDE in WQB-7 should be removed to be consistent with present drinking water standards.

RESPONSE: The reference to EDE in WQB-7 (Beta emitters standard) will be removed because the EPA no longer recommends the effective dose equivalent (EDE) analysis method for Beta emitters.

BOARD OF ENVIRONMENTAL REVIEW

By:

JOSEPH W. RUSSELL, M.P.H.,
Chairman

Reviewed by:

JAMES MADDEN, Rule Reviewer

Certified to the Secretary of State _____, 2001.